

Summary and Work Group Considerations

Lisa Grohskopf, MD, MPH
Influenza Division, NCIRD, CDC

Advisory Committee on Immunization Practices February 26, 2020

Acknowledgments

Influenza Division

Elif Alyanak

Lenee Blanton

Lynnette Brammer

Joe Bresee

Alicia Budd

Jessie Chung

Scott Epperson

Jill Ferdinands

Brendan Flannery

Alicia Fry

Dan Jernigan

Krista Kniss

Manish Patel

Melissa Rolfes

Jerry Tokars

Tim Uyeki

Immunization Safety Office

Karen Broder

Frank Destefano

Penina Haber

Tom Shimabukuro

Immunization Services Division

Sam Graitcer

Andrew Kroger

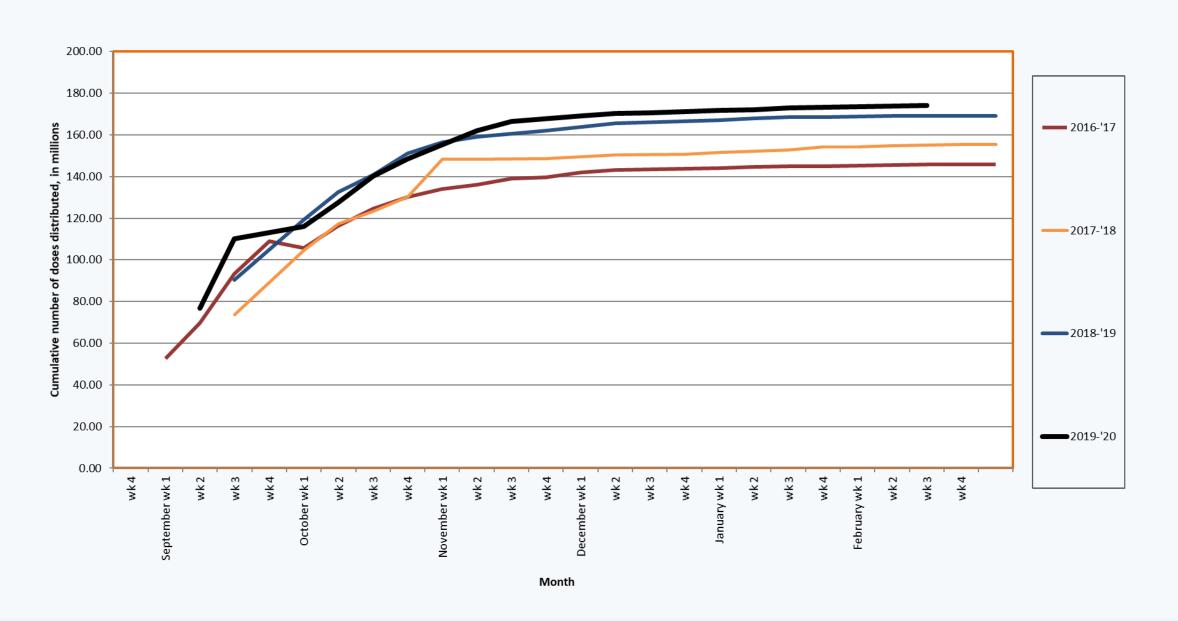
Amy Parker Fiebelkorn

Jeanne Santoli

Rebecca Morgan

Influenza Vaccine Distribution Update

Cumulative doses of influenza vaccines distributed by month, by season: 2016-'17 - 2019-'20



Influenza Vaccines for Older Adults— WG Considerations

Abbreviations

IIV Inactivated Influenza Vaccine

ccIIV Cell culture based Inactivated Influenza Vaccine

allV Adjuvanted Inactivated Influenza Vaccine

HD-IIV High-Dose Inactivated Influenza Vaccine

RIV Recombinant Influenza Vaccine

LAIV Live Attenuated Influenza Vaccine

Numbers indicate the number of influenza virus antigens:

3 for trivalent: an A(H1N1), an A(H3N2), and one B (from one lineage)

4 for quadrivalent: an A(H1N1), an A(H3N2), and two Bs (one from each lineage)

U.S.-Licensed Influenza Vaccines Available for 2019-20

Available vaccines by FDA-licensed age indication:

Vaccine type	6 through 23 mos	2 through 3 yrs	4 through 17 yrs	18 through 49 yrs	50 through 64 yrs	≥65 yrs	
IIV4s (egg-based)	Afluria Quadrivalent Fluarix Quadrivalent FluLaval Quadrivalent Fluzone Quadrivalent						
IIV4 (cell-based)			Flucelvax Quadrivalent				
RIV4 (recombinant)				Flublok Quadrivalent			
Adjuvant IIV3 (egg-based)						Fluad	
High-dose IIV3 (egg-based)						Fluzone High-dose	
LAIV4 (egg-based)		FluMist Quadrivalent					

- ACIP recommends that a licensed, age-appropriate influenza vaccine should be used.
- No preferential recommendations are made for any specific influenza vaccine for any age group, where there is more than one that is appropriate.

Systematic Review/Meta-analysis--Question

Whether the relative benefits and harms of HD-IIV, allV, and RIV, as compared with one another and with other influenza vaccines, favor the use of any one or more of these vaccines over other age-appropriate influenza vaccines for persons ≥65 years of age.

Current Systematic Review/Meta-analysis—PICO (1)

Population: Adults aged ≥65 years

Interventions: Trivalent/quadrivalent high dose IIV, adjuvanted IIV, or RIV

(U.S.-licensed, or similar in formulation/manufacture to U.S.-licensed)

Comparators: Other trivalent or quadrivalent influenza vaccine

(U.S.-licensed, or similar in formulation/manufacture to U.S.-licensed)

Non-influenza control vaccine

Placebo

No vaccine

Current Systematic Review/Meta-analysis—PICO (2)

Primary Outcomes: Efficacy/Effectiveness

- All influenza -- A and B
- Influenza-associated outpatient/emergency visits
- Influenza-associated hospitalizations
- Influenza-associated deaths

Safety

- Any systemic adverse event (grade ≥3)
- Any injection site adverse event (grade ≥3)
- Any serious adverse event (SAE)
- Guillain-Barre syndrome

Current Systematic Review/Meta-analysis—PICO (3)

Secondary Outcomes:

- To the extent data are available, the following will be summarized:
 - Influenza-associated outpatient/emergency visits, hospitalizations, and deaths, stratified by influenza virus type/subtype
 - Serious adverse events (SAEs) judged to be related to study intervention

Inclusion/Exclusion Criteria

- Peer-reviewed literature; no language restriction
- Publication dates from 1990 forward
- Main inclusion criteria:
 - Randomized studies (individually- and cluster-randomized designs)
 - Retrospective case-control studies (traditional and test-negative designs)
 - Retrospective and prospective cohort studies.

Main exclusion criteria:

- Data involving influenza vaccines not licensed in the United States for persons ≥65 years of age
- Studies/data for which the entire population falls outside age range of interest
- Studies/data assessing monovalent or bivalent vaccines
- Case series, case reports, registry reports without comparator or denominator information
- Animal studies
- Interim reports superseded by final reports